

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024082**Date Inspected:** 19-May-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the Self-Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

This Quality Assurance (QA) Inspector observed the following work in progress:

TA YARD

OBG Seg 14W:

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020C-029 [Complete Joint Penetration (CJP) weld at panel point (PP) 128.7]. The welder is identified as 057220 and was observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020AZ-020 [CJP weld at PP128 to PP 128.3]. The welder is identified as 067572 and was observed welding in 4G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

Repair welding of weld joint no: SEG3020AQ-025[CJP weld at PP 125 to PP 127]. The welder is identified as

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

040611 and was observed welding in the 4G position. Welding process was identified as SMAW. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-4G(4F)-FCM-Repair-1. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2923 Rev-0.

Repair welding of weld joint no: SEG3020U-591[CJP weld at PP 126]. The welder is identified as 067764 and was observed welding in the 4G position. Welding process was identified as SMAW. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-4G(4F)-FCM-Repair-1. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2943 Rev-0.

The SMAW process on weld joint no: SEG3020*-008. The welder is identified as 037723 and was observed welding in 4G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-B-U2-FCM-1.

The SMAW process on weld joint no: SEG3020*-011. The welder is identified as 068097 and was observed welding in 4G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-B-U2-FCM-1.

The SMAW process on weld joint no: SEG3020Q-097 [CJP weld at PP126]. The welder is identified as 040655 and was observed welding in 4G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020Q-160/161 [Fillet weld at PP126]. The welder is identified as 066459 and was observed welding in 3F position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2113-FCM-1.

During Quality Assurance (QA) random visual inspection of OBG Segment 14 West Top anchorage plate, this Caltrans QA Inspector observed the following issue:

- ZPMC personnel have miss-drilled a total of Seven (7) 30mm diameter bolt holes resulting in damage to the weld below.
- Three holes were match drilled in the Top Anchorage Plate (AP3013A), and penetrate into the Vertical shear plate extension plate (X5064A) to the Top Anchorage Plate (AP3013A) CJP (completed joint penetration) T-joint. The damaged CJP weld is identified as SEG3020BB-012 at panel point 126.
- One hole was match drilled in the Top Anchorage Plate (AP3014A), and penetrates into the fit up of fillet weld (SEG3020BB-121 and 130) of Vertical stiffener plate (X5067A) to the Top Anchorage Plate (AP3014A) at panel point 126.
- One hole was match drilled in the Top Anchorage Plate (AP3015A), and penetrate into the Vertical shear plate extension plate (X5060A) to the Top Anchorage Plate (AP3015A) CJP (completed joint penetration) T-joint. The damaged CJP weld is identified as SEG3020BB-048 at panel point 126.
- Two holes were match drilled in the Top Anchorage Plate (AP3016A), and penetrate into the Vertical shear plate extension plate (X5058A) to the Top Anchorage Plate (AP3016A) CJP (completed joint penetration) T-joint. The damaged CJP weld is identified as SEG3020BB-066 at panel point 126.
- The members are identified as Seismic Performance Critical Member (SPCM).

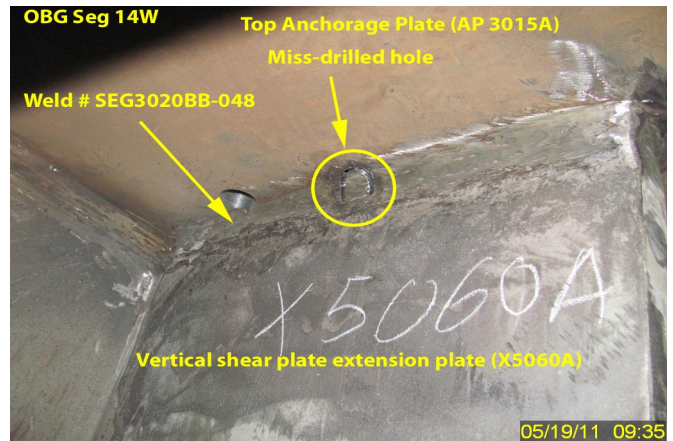
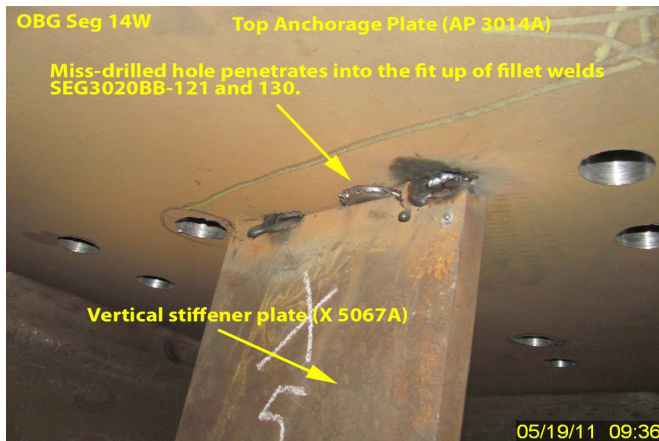
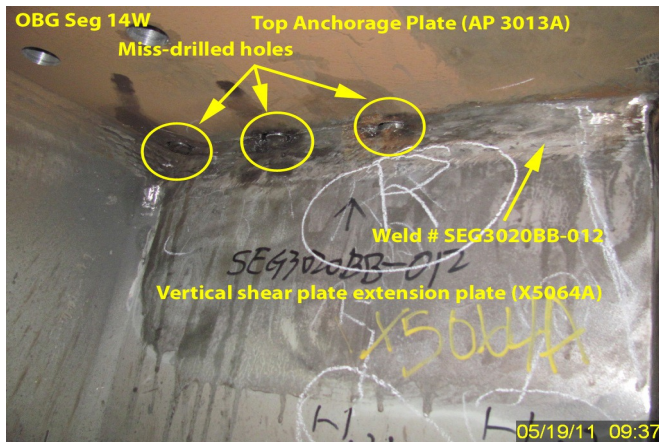
WELDING INSPECTION REPORT

(Continued Page 3 of 4)

- The damaged welds are designated as Fracture Critical Welds (FCW).
- OBG Segment 14 West is located in Trial assembly.

For further information, please see the attached pictures below. An Incident Report (IR) for this issue was generated on this date.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Gaikwad, Umesh

Quality Assurance Inspector

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Reviewed By: Peterson, Art

QA Reviewer